REMARKS

In an Office Action dated February 9, 2006, the Examiner rejected claims 1, 3, 5-8, 10, and 12-14 over the teachings of U.S. Publication No. 2003/WO50075 (Rangarajan) in view of International Publication No. WO 00/51365 (Sawyer); rejected claims 2 and 9 over these publications and further in view of U.S. Publication No. 2005/0032532 (Kokkonen); and rejected claims 4 and 11 under 35 U.S.C. 103(a) as being unpatentable over the publication cited for claim 1 and further in view of U.S. Patent 6,470,182 (Nelson).

Responsive to the grounds for these rejections, Applicants will concentrate on the grounds for the rejection of the only independent claims, claims 1 and 8.

Specifically, the Examiner has cited Sawyer because Rangarajan did not disclose a method

wherein a database, translating between said data for identifying said base station and sector, and said data for identifying at least one of a country, a vendor, a region, and a service provider of said base station to obtain identification in a standard format of said base station and sector; and

translating from said identification in a standard format of said base station and sector to a geographic location of said base station and sector

The Examiner stated that:

In an analogous art, Sawyer discloses a geographical information for location-based service. Sawyer further discloses a method wherein [a database is used to] obtain identification in a standard format of said base station and sector (page 4, line 15 - page 5, line 12); and

translating from said identification in a standard format of said base station and sector to a geographic location of said base station and sector (page 5, lines 2-12).

For the Examiner's convenience, Applicants are reproducing the cited passage from Sawyer:

FIG. 1 is a simplified block diagram of an ANSI-41 cellular telecommunications network 10 modified in accordance with the teachings of the present invention. A mobile station 11 is shown operating within the cell coverage area 12 of a radio base station (RBS) 13. When the mobile station registers, a Cell-ID 14 is sent to a serving mobile switching center (MSC) 15 over an interface 16 which may be implemented in accordance with IS-634 or a proprietary interface. Within the MSC is Radio Network Controller (RNC) software 17 and Mobile Switching Center (MSC) software 18. The RNC

software processes the registration and sends the Cell-ID or a location area identity (LocArea-ID) to the MSC software for the location where the registration was received. A location area is a group of cells within which the mobile station may roam from cell to cell without having to re-register.

The MSC 15 interfaces with the rest of the service network 19 utilizing the ANSI-41 intersystem signaling protocol 21. The MSC sends a Registration Notification (REGNOT) Invoke message or a location updating message to the HLR 22. This message normally includes the Cell-ID or the LocArea-ID along with a MSC identity (MSCID). The HLR functions to provide radio network access, and is capable of recognizing cells or groups of cells. The service network may also include various gateways 23 connecting to other networks, and a message center 24.

The RNC software 17 interfaces with the radio access part of the network, and handles radio access on a cell basis. Therefore the RNC software recognizes and utilizes cell-related identities such as Cell-IDs and LocArea-IDs. The present invention adds a cell/coordinate table 25 to the MSC 15. The cell/coordinate table converts Cell-IDs and LocArea-IDs to sets of latitude and longitude coordinates. The coordinates are then passed to the MSC software 18, and the coordinates are included in the ANSI-41 messages sent from the MSC to other nodes in the service networks. Since some nodes in the service network such as the HLR 22 are currently programmed to recognize Cell-IDs and LocArea-IDs, the preferred embodiment of the present invention includes Cell-IDs and LocArea IDs in the ANSI-41 messages as well. [WO 00/51365, page 4, line 15 - page 5, line 12]

The subject matter which is recited in the last two clauses of claim 1 is based on the Detailed Description, page 4, line 20 - page 5, line 6. These are being reproduced here for the convenience of the Examiner:

In accordance with the ANSI-41 Standard, the cell and sector identification information consists of three sets of double octet entities. The first set is a location area identifier. The second set is a serving cell identifier and the last set is a target cell identifier. No target cell identifier is needed if the mobile station is not being handed off. The location area identifier identifies the cell and sector in which the mobile station is currently found. The serving cell identifier also identifies the cell and sector in which the mobile station is currently found. For the case in which a mobile station is being handed off between one cell and sector and a second cell and sector, the target cell identification is used to identify the cell and sector to which the mobile station is being handed off. For some vendors, such as all vendors providing systems to China, the base station identification consists of the 8 bits of the first byte and 4 bits of the second byte, the other 4 being used for a sector identification; for other countries and other vendors, the first byte contains 4 bits of the base station identification and 4 bits to identify the sector while the second byte contains the other 8 bits of the base station identification. This layout has not been standardized. The database is required to perform the translation from a varied format and data for identifying the format, and to perform the translation from the identification of the base

station and sector to a geographic location. [S. Wan 1-19-10, page 4, line 20 - page 5, line 6]

Thus, as stated by Sawyer:

The RNC [Radio Network Controller] software processes the registration and sends the cell-ID or a location area identity (LocArea-ID) to the MSC software for the location where the registration was received...The RNC software 17 interfaces with the radio access part of the network, and handles radio access on a cell basis. Therefore the RNC software recognizes and utilizes cell-related identities such as Cell-IDs and LocArea-IDs.

As noted in Applicants' disclosure:

For some vendors, such as all vendors providing systems to China, the base station identification consists of the 8 bits of the first byte [a location area identifier] and 4 bits of the second byte, the other 4 being used for a sector identification; for other countries and other vendors, the first byte contains 4 bits of the base station identification and 4 bits to identify the sector while the second byte contains the other 8 bits of the base station identification. This layout has not been standardized. The database is required to perform the translation from a varied format and data for identifying the format, and to perform the translation from the identification of the base station and sector to a geographic location. [Emphasis added]

In summary, as shown in Applicants' document, there is no universal international standard for the specification of a location area identifier. Applicants have specified a two-stage process. In the first stage a received location area identifier is converted into a standard format location area identifier (so that, for example, the Chinese format is converted into a U.S. format in a U.S. system); in the second stage, the standard format location area identifier is translated to a geographic location. Applicants respectfully submit that Sawyer does not teach the conversion of a non-standard location area identifier received in a service network to a standard format location area identifier for subsequent conversion into a geographic location. It is clear from the cited passage that there is no such teaching of converting a received location area identifier into a standard format location area identifier.

Accordingly, Applicants respectfully submit that the subject matter of claim 1 and the analogous apparatus claim 8 is not taught by the combination of Rangarajan and Sawyer, and should be held allowable.
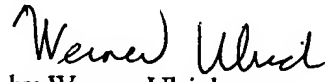
The subject matter of claims 3 and 5-7, dependent from claim 1, and claims 10 and 12-14, dependent from claim 8 should then also be held allowable.

Accordingly, Applicants respectfully request that the rejection of claims 1, 3, 5-8, 10 and 12-14 be reconsidered, that these claims be held allowable, and the application including these claims be passed to issue.

If the Examiner feels that a fax or voice contact would help to advance the prosecution of this application, the Examiner is invited to call or fax Applicants' attorney at 630 469-3575.

Respectfully submitted

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